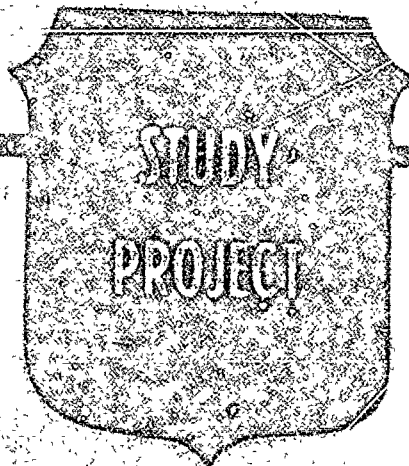




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TARGETING ON THE ALB-F BATTLEFIELD

BY

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United States Army

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CHAPTER 1

INTRODUCTION

The remarkable changes that have occurred in the past year have created new challenges for the political and military leadership of the United States. These challenges, coupled with a declining economy are having and will continue to have a dramatic impact on the U.S. military force structure. The decisions we are making today in force structure and combat developments will establish a basis for the direction of the Army in the near future and beyond.

Background.

The AirLand Battle-Future (ALB-F) Umbrella Concept is a evolutionary concept of how United States (U.S.) land forces could be used to implement national policy in the time frame 1995 and beyond. Legal Mix VII, is a study being conducted by the U.S. Army Field Artillery School at Fort Sill, Oklahoma, which seeks to outline a strategy for the integration of fire support in the ALB-F concept. Based on this concept of future doctrine, timely and accurate targeting will play a more critical role in the overall mission of the field artillery under the ALB-F doctrine. This study seeks to examine the targeting process using command, control, communications and intelligence (C³I) systems projected for fielding in the 1996-2006 time frame. Specifically it examines the assets required to execute the targeting process at the brigade, division and corps on the ALB-F battlefield.

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TARGETING ON THE ALB-F BATTLEFIELD

AN INDIVIDUAL STUDY PROJECT

by

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ABSTRACT

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The automation of the command, control, communication and integrating (C³I) process; and changing doctrine and tactics of the future require a new approach to targeting. The ability to plan, coordinate, and assign fire support systems through automation will allow a better selection of high payoff targets in a timely manner. This will increase the processing of information far beyond what is currently possible. Brigades will be able to process more information than is currently being processed by a division. This capability must be properly organized and focused to achieve maximum efficiency. This study examines the targeting process as it applies to forces fighting under the AirLand Battle Future Doctrine using C³I systems projected for fielding in the 1996-2006 time frame.

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CHAPTER 1

INTRODUCTION

The remarkable changes that have occurred in the past year have created new challenges for the political and military leadership of the United States. These challenges, coupled with a declining economy are having and will continue to have a dramatic impact on the U.S. military force structure. The decisions we are making today in force structure and combat developments will establish a basis for the direction of the Army in the near future and beyond.

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Assumptions.

In conducting this study, the following assumptions must be made:

1. That future doctrine will reflect the basic concepts and trends described in the final coordinating draft of the *AirLand Battle Future Umbrella Concept*, dated 10 September 1990 and in the working draft of *Trends and Implications for the U.S. Army's Future AirLand Battle*, dated 18 January 1991.

2. That improved command and control systems, long range field artillery assets and the family of smart munitions currently under development or projected for future development will be fielded in a time frame compatible with the implementation of ALB-F doctrine.

3. That the reader has a general working knowledge of U.S. Army maneuver tactics and operational employment of fire support assets.

Limitations and Scope.

As this study is being conducted, numerous AirLand Battle-Future study teams and general officer steering committees continue to refine and improve upon the concept to conform to the guidance provided by the Army Chief of Staff. This study will deal with information made available before 1 February 1991 and any major changes which could affect the final conclusions thereafter. A major limiting factor in conducting this study is my personal lack of experience of never having served on a corps staff. This study is being conducted without the ability to test any of the recommended changes. It is imperative however, that changes to doctrine, material, mission, organization or size of the force be carefully analyzed prior to changes being made. The primary focus is on those fire support elements found in units belonging to a U.S. heavy corps.

Definitions.

The following definitions are provided for consideration in this study:

Fire Support: The collective and coordinated use of indirect fire weapons, aircraft, and other lethal and nonlethal means in support of a battle plan.¹

Doctrine: Fundamental principles by which the military forces, or elements thereof, guide their actions in support of objectives. It is authoritative but requires judgment in application.²

Tactics: The employment of units in combat. The ordered arrangement and maneuver of units in relation to each other and/or to the enemy in order to utilize their full potentialities.³

Technique: A means or way of accomplishing a desired procedure.⁴

Maneuver: The movement of forces supported by fire to achieve a position of advantage from which to destroy or threaten destruction of the enemy.⁵

Targeting: A process based on the friendly scheme of maneuver and tactical plan and an assessment of the terrain and threat which identifies those enemy functions, formations, equipment, facilities, and terrain which must be attacked to ensure success. Targeting begins with the commander's maneuver guidance, and continues through the development of a prioritized list of what targets are to be attacked, when they are to be attacked, why they are to be attacked, and what the conditions of success and failure are. This process concludes with the commander's decision on which broad attack option will be used to engage the various targets--maneuver, fire support, or both.⁶

CHAPTER TWO

AIRLAND BATTLE FUTURE CONCEPTS

A brief examination of the ALB-F is necessary to understand how the targeting process is integrated and why changes to the current process are necessary. We will begin by examining at what our strategic leaders envision as the Army's role in the future and then examine the operational and tactical concepts required to execute future Army missions. Finally, we will look at how the fire support responsibilities have been expanded to support the ALB-F concept.

The ALB-F concept attempts to tie future Army missions and requisite forces to our national interest and national security objectives. While recognizing that relations with the Soviet Union have improved, it stresses that they continue to be the only nation possessing the military means to threaten the survival of the United States. It is based on a global perspective which recognizes that the different regions of the world vary in importance in terms of national interests and military strategy. This concept attempts to establish a benchmark for evolving the Army to the future, using AirLand Battle (ALB) doctrine as the foundation for combat operations. The planners considerations in the development of this concept took into account, among other things, a reduction in the size of the Army, technological advancements, and potential threats to our national interest.⁷

The probability of being involved in a global nuclear war or high intensity protracted conventional war is rapidly diminishing. The most likely scenario for future battles are regional conflicts fought at the low to mid intensity levels. Therefore, the ALB-F concept calls for a combination of smaller but adequate forward deployed

forces, a contingency force that can be rapidly tailored to meet the threat, nation assistance forces used to enhance regional stability, and reinforcing forces capable of rapid deployment.■

The Stages of Combat Operations.

Under this concept a corps would normally be the largest unit committed to the conflict. Combat operations will be conducted in four stages which will overlap and often intermingle: (1) detection/preparation (2) establish conditions for decisive operations (3) decisive operations (4) reconstitution.▼

Stage I commences before the force is deployed into the theater. It includes those activities designed to protect the force and prepare the battlefield. Intelligence activities from the national to the tactical level provide the operational commander detailed information concerning the enemy forces. Targeting information is fed to appropriate target attack systems which will begin to develop the battlefield with fires. This process continues until the force deployment is complete and the commander has developed a concept of the operation and announced his intent.1●

In Stage II, the commander develops conditions that lead to decisive operations. This stage was initially referred to as the "fires stage", for it is here that the commander begins to shape the battlefield with fires. Detailed, accurate, real-time intelligence and reliable, long range communications are required to provide target information and command and control. Fires must be long range, accurate, lethal, indirect, massed both air and ground to destroy

enemy maneuver forces, fire support, and command and control throughout the depth of the battlefield. There is a substantial requirement for ammunition and fuel, especially aviation fuel.¹¹

Once the commander has shaped the battlefield and made it favorable for the introduction of decisive maneuver forces, Stage III commences. The operational commander must insure that intelligence and fire support assets are apportioned to support maneuver forces while continues to he continues to use targeting, intelligence and deep attack assets to plan for the conduct of subsequent operations.¹²

In Stage IV the commander must attempt to reconstitute the force, as closely as possible, to its original capability in a reasonable amount of time.¹³

The corps commander would have operational and tactical responsibilities for the initial stages of finding and fixing the enemy as well as fighting the deep battle. The division commanders, furnished with tailored, nearly self-sustaining brigades from the corps, will provide the tactical command and control headquarters for the close battle. The corps commander will resume command for the fourth stage of the operation.¹⁴ To execute this concept, there will be a greater need for high technology weapon systems with greater mobility, lethality and the range to offset the reduced size of the force and strike targets deep in the enemies rear area of operation.

The decision makers at the corps must have accurate, timely intelligence. Information from all sources, to include space assets, must be integrated and made immediately available to appropriate headquarters. Additionally, the execution of this concept requires

enhanced target acquisition, distributed command and control assets and new tactics that favor execution in a joint arena.

AirLand Battle-Future Fire Support Concept.

"AirLand Battle-Future will also have a major impact on fire support."¹³

The prevailing thought is that battlefields of the future will no longer be linear. No longer will units be linked in the defense to prevent bulges in their lines and attacks along a unified front will be the exception rather than the rule. On the non-linear battlefield gaps will exist between units. Fire support will compensate for these for these gaps.

Fire support can be employed to seize and retain the initiative by destroying enemy maneuver force, denying the tactical flexibility of his reserves and following echelons, destroying deep strike units and controlling the operational tempo. The most important roles of fire support are the destruction of enemy maneuver forces and indirect fire systems.... In conflict, precision long range fires tip the theater balance, put enemy forces at risk, and can interdict the enemy's ability to use force. The key to effective employment of indirect fires includes target acquisition and dissemination of target data to firing units in real time to facilitate the surprise attack.¹⁴

On the linear battlefield commanders normally focus on seizing or retaining terrain. On the non-linear battlefield commanders must focus on the enemy force itself. As noted in the above quotation, fires may be maneuvered to destroy enemy maneuver forces. The concept of maneuvering fires adds to the responsibilities of both the corps artillery commander and his subordinate brigade artillery commanders. A corps artillery commander will no longer be just a primary allocator of assets. In stages one and two of combat operations he must assume

the role of a warfighter. That means maintaining the field artillery brigades under his direct control during these stages of the battle. As the corps fire support coordinator (FSCORD) he must plan, coordinate, and synchronize all fire support assets. He advises the commander on the use of fires, recommends target priorities, establishes attack guidance and allocates fire support for maneuver forces.¹⁷ He is also responsible for coordinating implied tasks which include such things as security, positioning, air defense and logistics support. To assist him in managing these requirements, the responsibilities of the field artillery brigade commander will be expanded.

Today the field artillery brigade commander's duties in combat are minimal to say the least. The brigade may be assigned any of the standard missions, however, the brigade commander usually finds himself in a reinforcing role to the division artillery (DIVARTY). If he is fortunate, he may be assigned an additional mission as the alternate DIVARTY tactical operation center (TOC) or tasked to perform the counterfire mission. Under ALB-F, he could serve as strike force commander during stage two (fires) of a combat operation. His specific tasks could include attacking specified targets within his assigned zone or zones of fire, maneuvering the fires of subordinate battalions, or controlling the maneuver of designated field artillery units for the purpose of conducting artillery raids or out of sector missions. The most significant change is that the fires delivered during this phase may be independent of maneuver. While the role of both the corps artillery commander and the field artillery brigade

commander are expanded under the ALB-F concept, there is no real change in the duties of the DIVARTY commander.¹⁸

During stages one and two of combat operations, the direct support battalions of the DIVARTY remain positioned to support their assigned maneuver brigades. Once the maneuver brigades are committed, the non-linear concept is repeated, this time at the division level. The DIVARTY continues to share the responsibility for attacking of enemy indirect fire systems with corps artillery.¹⁹

Under ALB the field artillery has three types of missions which are described as close support, deep attack and counterfire. In the above explanation of the commanders responsibilities, the term "counterfire" was intentionally omitted. The execution of the counterfire mission has been a point of contention among artillery commanders under ALB. This is because the mission is fragmented, everyone in the chain, from battalion to corps, has had the responsibility for counterfire and no one headquarters has the resources required to execute the mission. AirLand Battle-Future describes artillery missions as being either close support or long range fires. The mission of "counterfire" has been omitted as the attack of enemy indirect fire systems is inherent in close support and long range fires.²⁰ One concept that has been added that merits discussion here is "firestrike".

A firestrike is special mission to destroy enemy by fires, that is independent of maneuver. It will be conducted over a period of time. Firestrikes could last several hours or several days until the conditions are established for decisive maneuver operations. "In

short, a firestrike is a carefully conceived, detailed plan which links [remote] sensors with shooters to accomplish a mission with fires."²¹

Organizational Characteristics.

Organizational changes in ALB-F forces have some obvious and some implied impacts on the targeting effort. Units are characterized as being smaller and easily tailored. Combined arms brigades are building blocks for corps, while divisions and battalions are primarily tactical headquarters. The focal point for all intelligence and surveillance efforts will be at the corps. To assist in this process the cavalry and reconnaissance requirements will increase. Lastly, the corps retains the responsibility for the deep battle in all stages of combat operations while the division fights the close battle at greater depth. These changes in organizational characteristics dictate that the primary targeting effort will be focused at the corps. The division and/or division artillery will not require the same level of targeting effort under the ALB-F concept as it does today.

CHAPTER III

THE TARGETING PROCESS

As inferred in the definition of targeting on page 3, the targeting methodology is described as decide, detect, and deliver. This methodology remains a principle feature of the targeting process under the ALB-F concept.²² Using the decide-detect-deliver methodology as a guide, this chapter addresses how the targeting process works under the ALB doctrine and how it could be changed to accommodate ALB-F concepts. The discussion addresses the technological advances in weapons systems, munitions, acquisition assets and command and control equipment and how the targeting teams at corps, division, and brigade can be changed to function on the ALB-F battlefield.

The Targeting Team.

By far the most important player in the targeting process is the maneuver commander, as he is responsible for the overall targeting effort. The other key player in the targeting process, at each level corps and below, is the artillery commander or FSCOORD who advised the commander on all fire support matters. Other essential members of the targeting team, which are found at each level, include the intelligence officer, operations officer and the fire support officer. Numerous other staff activities provided input to the targeting process based on the mission and the level at which the targeting is being conducted. For a detailed listing of targeting teams, found at the corps, division and brigade, see Appendix A.

How the Targeting Process Works.

The targeting process begins with the brigade commander announcing his concept of operations, which includes the commanders intent. The targeting team then begins a continual effort of integrating information on enemy formations, equipment, and facilities. It is during the decide phase of the process that the targeting team recommends acquisition assets to be used and how they could best be employed, how information should be processed, the best means of attacking targets, and requirements for post attack assessments. As a result of the decide function, the commander issues his targeting guidance, priority intelligence requirements (PIR) and information requirements (IR). The targeting team also submits the high-payoff target list, the target selection standards, and the commander's attack guidance to the commander for his approval.

During the detect function, the information gathered by all the collection assets is processed into usable target data. Using the target priority list, targets are developed and passed to the appropriate attack system to be handled in accordance with the commander's attack guidance.

The objective of the deliver function is to select the appropriate system to attack the target in accordance the commander's attack guidance. Based on such considerations as attack systems availability, ammunition constraints and desired effects, a system is selected and the target is attacked. Following the attack, the target is assessed for damage. If the target damage assessment (TDA) does not meet the commander's attack guidance the process must continue.

Acquisitions/Collections Assets.

Under ALB doctrine, deep fire and/or counterfire is a shared responsibility. Therefore, the responsibility for the acquisition of targets and location of

available acquisition assets

are divided between corps

and division, with the corps

having the lions share of

the assets. Experience from

the field indicates that the

targeting effort, at

division level and below,

has fallen squarely on the

shoulders of the artillery

community. The combat

training centers (CTC) have

helped to correct this error

by stressing that the entire

targeting team must be

involved. Nevertheless,

many fire supporter

personnel are still not

comfortable with the fact

that they do not manage many of the assets required to collect target

data. A large number of these assets are managed by the intelligence

and electronic warfare (IEW) community for surveillance and

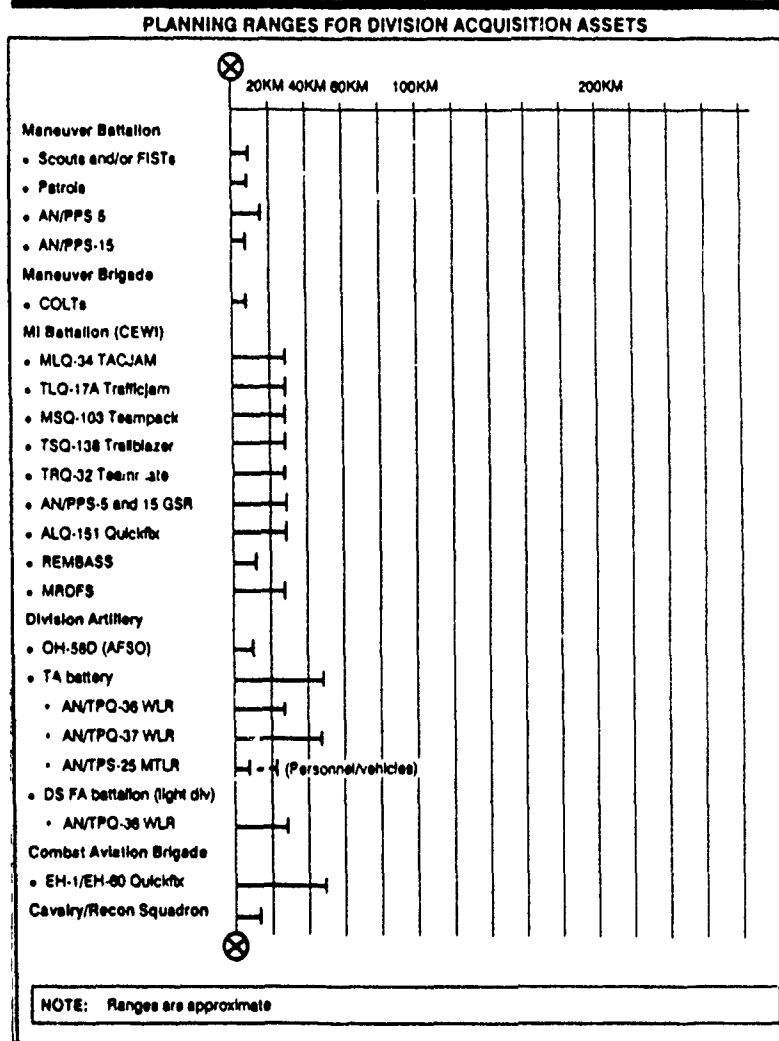


Figure 1

reconnaissance in an attempt to track the enemy situation. Targeting is often seen as a secondary mission. As noted in the a recent article published in *Military Review*, "...target information passed to fire support agencies from intelligence sources has often been inadequate and too late to be of any real attack value."²³ The same is true for information that is requested from outside the division. A number of the acquisition assets organic to the division are old technology, easy to acquire and destroy, and all have limited range (see Figure 1).

The corps has a full range of acquisition assets. These assets are generally characterized as either signal intelligence (SIGINT), imagery intelligence (IMINT), or human intelligence (HUMINT). SIGINT is further categorized as communications intelligence (COMINT) and electronics intelligence (ELINT). Although corps acquisition systems have the capability to look much deeper than the division (see Figure 2), they are inadequate to perform the full range of requirements necessary to execute ALB doctrine. For example, IMINT aircraft cannot survive when flying across the forward line of friendly troops (FLOT) and HUMINT teams are few in number and have limited communications equipment. Requirements for reconnaissance, intelligence, surveillance and target acquisition (RISTA) is available to the corps commander from assets at echelons above corps (EAC). The problems with tasking RISTA assets at EAC is that the information usually takes several hours to reach the corps.²⁴ The Army has been developing a unmanned aerial vehicle (UAV) for several years. When fielded, this system will provide the corps and division realtime intelligence and

target information.

The discussion of the brigade acquisition assets is last because the brigade has very little sophisticated equipment. The majority of information generated at the brigade is collected by HUMINT sources and is limited by the ability to communicate and training of reconnaissance personnel. Keep in mind that the brigade commander's mission is to fight the close battle and that he does not need additional equipment to drag around the

battlefield. To exercise the tenets of ALB and penetrate the enemies decision cycle the brigade commander needs detailed, accurate, realtime information. The brigade commander can request information from outside the brigade, but as with the division and the corps such information is normally inadequate for any real target attack value.

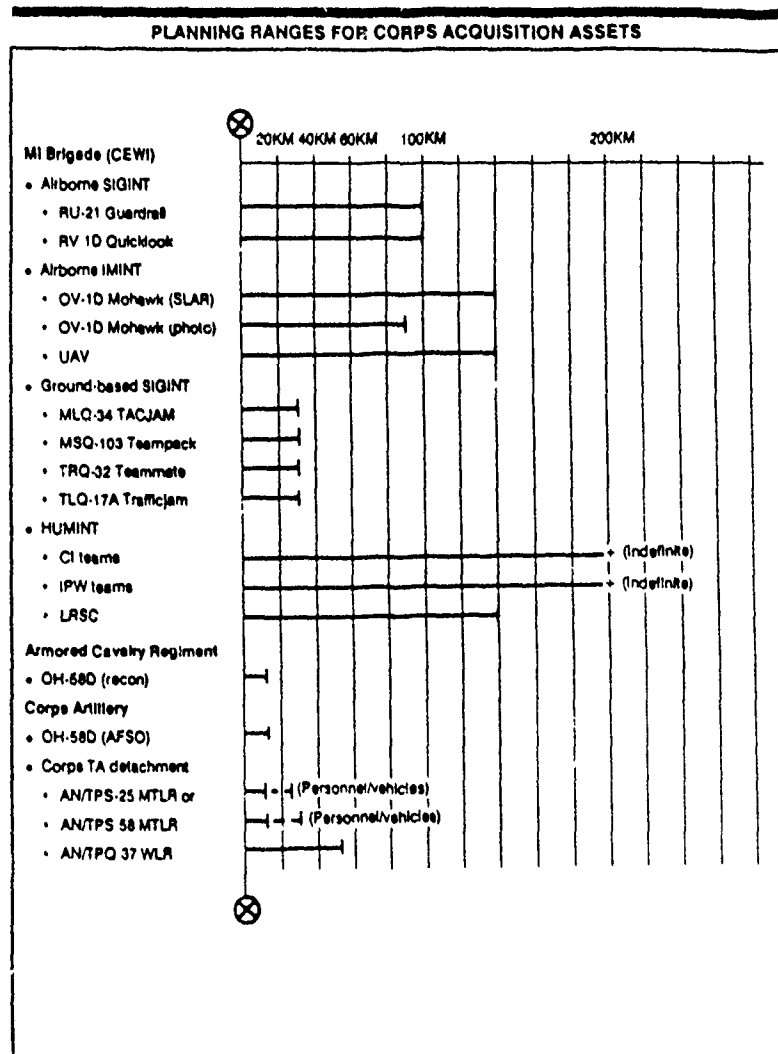


Figure 2

Attack Assets.

Although the recent crisis in the Middle East necessitated the early fielding of at least

one attack system (the Army tactical missile system

[ATACMS]), the current fire support fleet is unable to

fulfill all the maneuver requirements for ALB-F

doctrine. Paraphrasing

from an article written

eighteen months ago by

Major General Hallada, our

aging howitzer fleet is

manpower intensive, its

effectiveness

deteriorating, it is costly

to maintain, and in some

cases, infeasible to

support. General Hallada

also noted, "Our cannon and rocket systems are being outranged by

like-caliber Soviet systems."²⁵ The only field artillery system in

the inventory that is capable of ranging corps and in many cases

division deep targets, is the aging and soon to be obsolete Lance

missile (see Figure 3).

There are a number of projects under development to correct, or

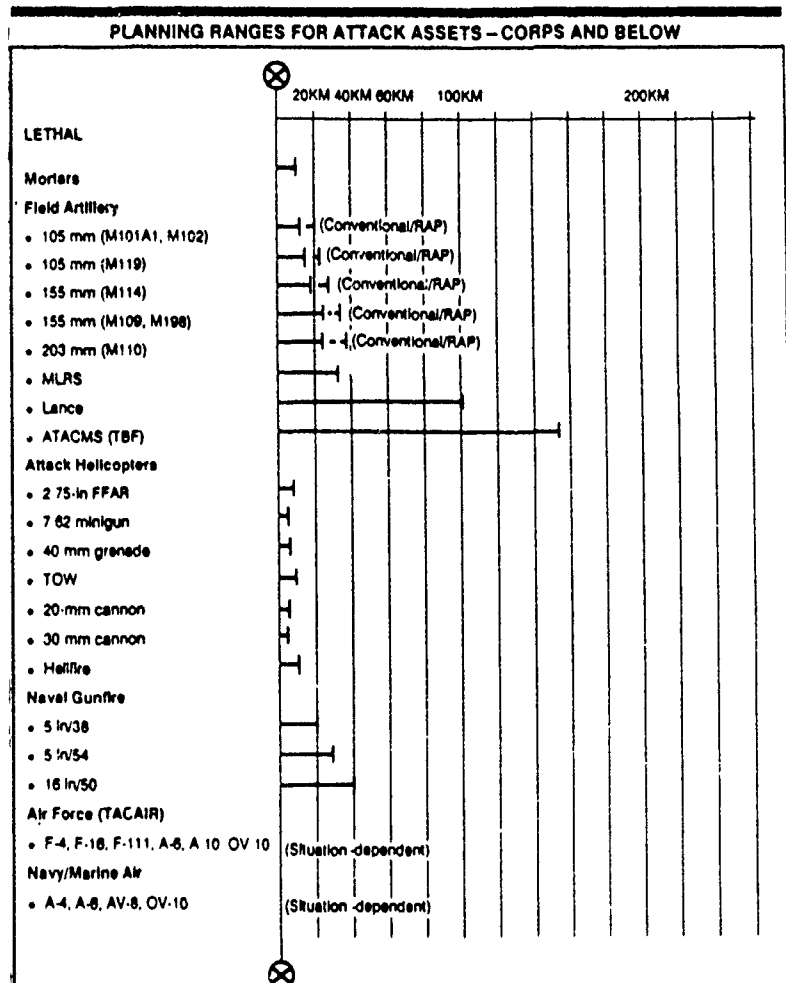


Figure 3

at least improve, the aging attack assets. The 8" howitzer and the Lance missile, which are manpower intensive systems, are being phased out of the inventory. The multiple launch rocket system (MLRS) and 155mm howitzer will replace these older systems to increase force-structure efficiency and firepower.²⁶ The howitzer improvements program (HIP) was initiated several years ago to upgrade the current 155mm fleet until the Advanced Field Artillery System (AFAS) can be fielded, sometime in fiscal year 2003.²⁷

The Defense Science Board concluded from a study conducted in 1988 that we need to accelerate fielding of sense and destroy armor (SADARM) smart munitions.²⁸ The SADARM series of munitions, along with other precision guided munitions (PGM), will allow us destroy moving enemy armor vehicles. There are a number of systems under development, like Tacit Rainbow, a missile which has the capability to fly autonomously, loiter in a predetermined area and then detect, classify and attack select targets.²⁹ A variety of smart munitions, both cannon and missile, are essential if the corps commanders is expected to be successful in executing establishing conditions for decisive operations on the ALB-F battlefield.

There are also a number of nonlethal attack system, found at corps level and below (see Figure 4). Although these systems have proven quite effective on the linear battlefield, their range is limited and once detected, they are easily destroyed.

Command, Control and Communications Assets.

The Army C³I Integration Council, located at the Combined Arms

Center, Fort Leavenworth, Kansas, has committed itself to a long-term modernization program for improving command and control (C²). The program includes enhancements in processes, equipment and facilities for C² to make it more supportive of the way we fight today and will fight in the future.

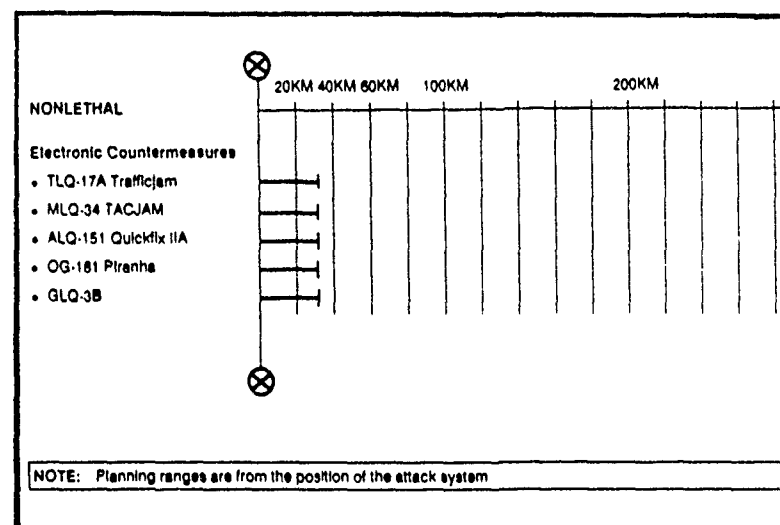


Figure 4

An elaborate plan has been developed that outlines how the Army Command and Control System (ACCS) must be structured to allow the commander to do his job. The ACCS links theater army to corps level and below size units through the Army Tactical Command Control System (ATCCS). The ATCCS is composed of a network of five functional systems (see Figure 5). Although much of the new technology is already in the hands of commanders, the battlefield functional areas of IEW, air defense, combat service support and fire support have not been fielded. Once fully automated, the ATCCS will allow commanders immediate access to critical information.

Of particular interest to this study is the fire support functional area of the ATCCS which has been under development for several years. The AFATADS (advanced field artillery tactical data system) is a lightweight, distributed architecture computer network that provides command, control and fire direction functions for field

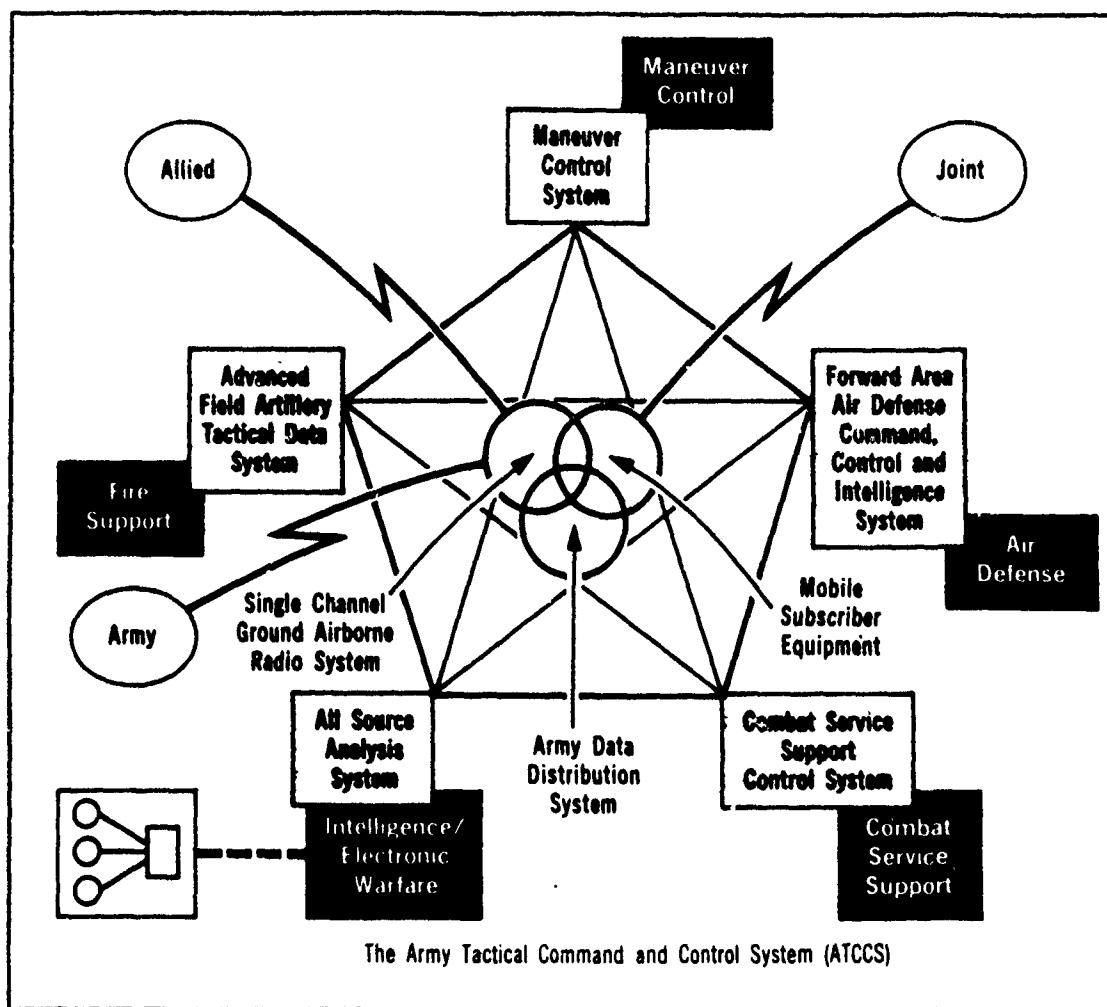


Figure 5

artillery and coordination and planning functions for fire support agencies. It considers field artillery, mortars, naval gunfire, air force, naval, army attack helicopters and offensive EW assets for planning and execution. The AFATADS also ties in target acquisition and sensor assets to provide targeting information and target damage assessment data. As depicted in Figure 5, this system exchanges information, data and plans with other battlefield functional areas. Some components of the system will be fielded as early as March 1991

as part of the light TACFIRE system with a total force fielding scheduled to begin in fiscal year 1995.³⁰

Trends and Implications

It is evident that we are in the midst of dynamic and significant change. Our Army is getting smaller and our mission is changing. Technological advancements in surveillance, acquisition, C² and deep attack weapon systems will provide commanders the tools to execute ALB-F concepts. In the February 1991 issue of *Army* magazine General Foss states, "These [technological] advancements will continue in the future".³¹ The challenge is to develop doctrine and organizations that allow us to use these assets on a non-linear battlefield and to do so intelligently. Before recommending changes to the design structure and responsibilities of targeting element personnel, the following force design implications are offered for consideration:³²

- o The corps commander decides how to fight the battle.
- o Systems not required all the time are retained at corps.
- o Use long range fires to set conditions of the battle.
- o Intelligence and surveillance is focused at the corps.
- o Below corps, artillery is used in direct support.
- o The critical fighting commanders are at division, battalion/company.
- o Corps and brigade commanders support the fight and integrate systems.
- o Deep battle is the corps fight (retains long range fires and target acquisition).

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

The recommendations drawn from this study have not been tested. They are based on AirLand Battle-Future concepts, results of initial analysis, trends and implications and personal experience. The following recommendations are offered for consideration:

1. RECOMMENDATION: The corps artillery commander should coordinate the overall targeting effort.

DISCUSSION: As evident throughout this study, in future conflicts the corps artillery commander will assume greater responsibilities in prosecuting the deep battle. Force design implications dictate that he will become the focal point for long range fires and that he will retain the assets needed to execute this mission.

2. RECOMMENDATION: Corps artillery should assume responsibility for the planning, coordination, and execution of all suppression of enemy air defense (SEAD) missions.

DISCUSSION: The SEAD mission has historically been shared between the division and the corps, much in the same way counterfire has been conducted. The division has never had the ability to do much more than give lip service to the execution of SEAD missions due to the limited range of acquisition and attack assets. With the corps retaining the long range target acquisition, enhanced deep attack

systems, and equipped with greatly improved C³I assets, it is ideally suited for the planning and execution of SEAD.

3. RECOMMENDATION: Corps artillery should be the sole agent responsible for the planning, coordination and execution of nuclear and chemical missions.

DISCUSSION: Under the ALB-F concept the division will be a tactical headquarters with the mission of fighting the close battle. It doesn't need to be burdened with nuclear or chemical analysis and targeting requirements. As shown in Appendix A, the corps has adequate personnel to perform the requirements. Additionally, current computer software we have the ability to perform complex nuclear and chemical analysis and targeting in a matter of minutes that heretofore took hours. Subordinate commanders will still have the ability to nominate targets. If a conflict should escalate to the point that special weapons are required, the corps could provide the required technical data and the weapon to the delivery system for firing, if the delivery platform is not already organic to the corps.

4. RECOMMENDATION: The corps targeting cell should not increase in size.

DISCUSSION: Although the new duties and responsibilities will increase the workload significantly, there is a no need to increase the size of the corps targeting element. As seen in Appendix A, the current corps targeting element is robust and easily tailored to meet contingencies. With the technological advances in microprocessors,

staff agencies will be able to conduct and transmit detailed target analysis in a fraction of the time required with the current equipment.

5. RECOMMENDATION: The division targeting element should become smaller.

DISCUSSION: As the role of the division commander changes to that of being primarily a battle captain, the size of the division headquarters should decrease. With the corps artillery assuming the primary responsibility for targeting, the division targeting element should be smaller with the reduction occurring primarily in the fire support element (FSE). The current table of organization for a heavy division authorizes six field grade officers for the FSE, one lieutenant colonel as the deputy FSCoord, four majors as assistant FSCOODS and one major as a target intelligence officer. With a reduction in responsibilities this number could be cut in half and still provide a 24 hour capability.

6. RECOMMENDATION: Consideration should be given to incorporating the DIVARTY TOC into the division FSE for field operations.

DISCUSSION: First it must be clear that the need for a DIVARTY headquarters is not an issue. There is clearly a requirement for maintaining a DIVARTY. As the Army gets smaller, we must insure that every soldier is use to benefit the organization to the maximum extend possible in peacetime and in periods of conflict. AirLand

Battle-Future concepts have taken the logistics requirements and therefore, much of the reporting responsibility away from the DIVARTY and shifted it to the corps. Only in stage three of combat operations will the DIVARTY have supporting artillery and this will be used almost exclusively in offensive operations. Therefore, the corps artillery battalions will most probably be reinforcing one of the divisions direct support battalions. The ALB-F concepts make it increasingly more difficult to justify the need for a separate DIVARTY TOC during periods of conflict. During periods of conflict, consideration should be given to using personnel, currently assigned to the DIVARTY TOC, as part of the division targeting team with primary assignments in the FSE.

7. RECOMMENDATION: The brigade FSE/targeting element should not change.

DISCUSSION: There is no requirement to change the force structure at the brigade level as the mission remains the same.

Final Assessment.

The first thing that became evident to me is that our senior artillery leadership had the vision to guide the artillery community in the right direction for the past decade. The programs under development will launch the artillery community onto the future ALB battlefield with long range, lethal, very accurate attack systems, greatly improved intelligence sensors, advanced acquisition systems, terminally guided munitions, and a vastly improved C² capability.

Targeting information from joint and combined forces will be immediately available to plan and execute fires with the fielding of AFATADS and ATCCS.

The transition to ALB-F will not occur immediately or all at once. It will occur very slowly over a period of 5 to 10 years as the Army becomes smaller, new equipment is fielded and new doctrine is developed. As we begin to shape the force to conform to emerging doctrine and take maximum advantage of the new technologies, we must do so wisely.

APPENDIX 1
CORPS, DIVISION AND BRIGADE
TARGETING PERSONNEL AND RESPONSIBILITIES
BASED ON AIRLAND BATTLE REQUIREMENTS

Information contained in this appendix was extracted from Field Manual
6-20-10, Tactics, Techniques, and Procedures for The Targeting
Process, dated 29 March 1990

CORPS PERSONNEL AND RESPONSIBILITIES

The corps commander issues guidance on the concept of the operation as well as for future operations. His intention and objectives guide the actions of the targeting team.

The corps FSCoord's responsibilities include:

- o Primary advisor to the corps commander on fire support matters.
- o Recommends artillery organization for combat.
- o Establishes and supervises the fire support cell.
- o Plans and synchronizes fire support.
- o Prepares the fire support portion of the corps operation plans and orders.

The corps deputy FSCoord's responsibilities include:

- o Recommends high-payoff target list to the corps FSCoord.
- o Provides status on fire support assets and plans their use.
- o Finalizes the attack guidance.
- o Supervises the functions of the targeting team.
- o Develops targets.
- o Uses TVA to identify target priorities.
- o Analyzes target priorities for acquisition and attack.
- o Recommends target priorities for acquisition and attack.
- o Determines, with help of sensors, targets for attack.
- o Determines minimum information required for each attack.
- o Determines, with the G2, targets for acquisition.
- o Determines fire support means to attack targets.
- o Coordinates suppression of enemy air defenses.
- o Monitors changes in the situation that could affect target priorities.

- o Receives target damage assessment.
- o Ascertains, with the G2, if desired effects were achieved.
- o Determines if additional attacks are required.
- o Coordinates timing of attack with the G3.

The G2 operations representative responsibilities include:

- o Developing the collection plan.
- o Maintaining the current enemy situation of the overall battlefield.
- o Provides assessments of probable enemy actions.
- o Analyzes and identifies targets on the basis of the commander's guidance.
- o Identifies high-value targets.
- o Provides input to the FS cell on target selection standards.
- o Helps the FS cell in developing target priorities.
- o Passes high-payoff and other targets to the FS cell for attack.
- o Develops intelligence of the battlefield (IPB) templates.
- o Nominates targets for attack.
- o Analyzes and disseminates target damage assessment (TDA) information.
- o Tasks through the collection manager for military intelligence brigade collection assets.

The G3 operations representative responsibilities include:

- o Concentrates on the future and contingency operations.
- o Ensures the plans reflect the commander's concept of the operation.
- o Influences the determination of high-payoff targets.

The field artillery intelligence officer responsibilities include:

- o Works in the CTOCSE to select critical target information and expedite it to the fire support system.
- o Monitors the threat situation, keeps the DFSCCOORD informed, and recommends changes to priorities and attack means.
- o Coordinates between the CTOCSE and the TCAE to ensure potential targets are recognized and passed quickly to the FS cell.
- o Understands the threat, target selection standards, attack guidance, and list of high-payoff target types.
- o Provides detailed information regarding accuracy requirements and how old information can be before it is no longer of use to the fire support system.
- o Indicates to the attack managers how important identification of the target is and when such identification is critical to the targeting effort.

The target analysts from the FSE responsibilities include:

- o Analyzing targets for possible attack by nuclear and chemical weapons.
- o Performs detailed nuclear target analysis and aimpoint refinement as part of the corps nuclear planning effort.
- o Gives the DFSCCOORD technical advice regarding nuclear weapons planning.
- o Helps the DFSCCOORD with conventional planning as required.

The intelligence analysts from the CTOCSE responsibilities include:

- o Maintaining a current enemy situation map.
- o Maintaining the target data base.
- o Receives immediate combat information from the enhanced tactical users terminal (ETUT), the ground station module (GSM), the tactical command terminal (TCT), and other assets.
- o Evaluates and analyzes combat information to identify HPTs.
- o Reports HPTs to the FAIO.
- o Templates potential HVTs and/or HPTs.

- o Recommends NAIs and TAIs to support targeting.
- o Coordinates with CM&D section to ensure adequate intelligence collection to support targeting.

The fighter liaison officer's responsibilities include:

- o Participating in the development of targets.
- o Helps evaluate targets.
- o Advises on suitability of targets for attack.
- o Advises on the best aircraft ordnance to attack the target.
- o Coordinates with the FS cell for SEAD.

The Air Force intelligence officer's responsibilities include:

- o Provides USAF input to analysis and plans.
- o Collects, processes, exploits, and disseminates air intelligence.
- o Provides SIGINT support.
- o Provides intelligence support to electronic combat.
- o Provides AF PIR to intelligence collection managers.
- o Interprets intercepted communications and signals.
- o Identifies, analyzes, and tabulates information for multisensor imagery.

The engineer representative's responsibilities include:

- o Advises on the obstacle and/or barrier plan.
- o Advises on attack of targets with scatterable mines.

The electronic warfare officer's responsibilities include:

- o Recommends electronic countermeasures (ECM) and electronic warfare support measures (ESM) requirements that will support the commander's intent.
- o Plans and coordinates the taskings and requests necessary to

satisfy ECM and ESM requirements.

- o Helps the ASPS in its portion of IPB, specifically the electronic preparation of the battlefield.
- o Recommends EW actions to support the friendly command, control, and communications countermeasures (C3CM) strategy.
- o Prepares EW estimates and annexes and develops the ECM mission taskings.
- o Assesses the enemy vulnerabilities, friendly capabilities, and friendly mission.

The chemical officer's responsibilities include:

- o Develops chemical and nuclear targets.
- o Helps evaluate targets.
- o Advises on suitability of targets for attack.
- o Provides guidance on the type and quantity of nuclear or chemical rounds suitable to engage a target.

The air defense officer's responsibilities include:

- o Provides enemy air targets within the corps area of interest.
- o Advises on air defense coverage for attack assets.
- o Advises on A2C2 for cross-FLOT operations.

The corps aviation officer's responsibilities include:

- o Advises on employment of attack helicopters, especially for deep operations.
- o Conducts aerial reconnaissance.
- o Recommends A2C2 measures for attack helicopter operations.

The G4 representative provides an estimate of logistical support.

DIVISION PERSONNEL AND RESPONSIBILITIES

The division commander, FSCCOORD, G2, and G3 are key influences on the targeting process.

The DFSCCOORD's responsibilities include:

- o Leads the targeting team.
- o Develops the HPT list, attack guidance matrix and TDA requirements.
- o Develops timeliness and accuracy guidelines for the target selection standards for use by the FAID and the FS cell.
- o Issues the HPT list, attack guidance matrix, and target selection standards to the division CPs, the divarty, and the brigade FSOs.
- o Provides target nominations to the targeting team.
- o Recommends to the targeting team methods of attack for approved targets.
- o Ascertains, with the G2 and/or G3 operations officer, whether desired effects have been achieved or continued target attack is required.
- o Supervises implementation of attack guidance with the FS cell and the divarty.
- o Supervises division close, deep and rear targeting operations.
- o Helps the G3 operations officer plan and execute all deep operations.

The G2 operations officer's responsibilities include:

- o Helps develop the HPT list, attack guidance matrix, and TDA requirements; and ensures they are integrated with the DST.
- o Develops the enemy situation for the targeting team.
- o Submits intelligence collection requirements to the collection manager.
- o Helps assess TBD and recommends additional target attacks as required.
- o Helps the G3 operations officer plan deep operations.

The G3 operations officer's responsibilities include:

- o Helps develop the HPT list, attack guidance matrix, and TDA requirements; and ensures these are integrated with the DST.
- o Approves, with the DFSCoord, targets and attack methods.
- o Plans and executes deep operations.
- o Helps assess TRD and recommends additional target attacks as required.

The field artillery intelligence officer's responsibilities include:

- o Provides the interface between the targeting team and the division TOC support element.
- o Provides timeliness and accuracy standards to the ASPS.
- o Helps the collection manager translate targeting team requirements into intelligence collection plan taskings.
- o Provides the CM&D section and the ASPS a detailed understanding of attack system requirements and field artillery TA capabilities.
- o Nominates targets to the FS cell.
- o With the ASPS, analyzes TDA data to determine remaining enemy capabilities. Forwards the results of the analysis to the DFSCoord.
- o Helps the ASPS develop targets by specifying the most important and perishable target sets.
- o With the ASPS, determines when major changes in the tactical situation warrant reassessment of the HPT list and attack guidance matrix.

The electronic warfare officer's responsibilities include:

- o Develops, with the DFSCoord, timeliness and accuracy guidelines for the target selection standards.
- o Helps the DFSCoord determine EW high-payoff targets.
- o Recommends EW methods of target engagement.
- o Provides ECM mission and tasking priorities to the TCAE via the division EW composite target list of the electronic warfare requesting/tasking message (EWRTM).

- o Receives a summary of EW missions from the electronic warfare mission summary report form the tactical control and analysis element (TCAE).

The G3 air responsibilities include:

- o Advises on the employment of all air attack and air defense assets.
- o Helps the G3 plan deep operations.
- o Ensures airspace coordination measures contribute to accomplishment of the commander's attack guidance.

Targeting responsibilities of other personnel are limited to their areas of expertise as they impact on target acquisition, development, and engagement. Personnel assisting the core members on an as-needed basis include, but are not limited to, the following:

- o G2 and G3 plans officers.
- o Air liaison officer.
- o Target analyst.
- o Chemical officer.
- o Aviation officer.
- o Collection manager.
- o Assistant division air defense officer.
- o Assistant division engineer.
- o Naval gunfire officer.
- o G5 representative.
- o Staff judge advocate representative.

BRIGADE PERSONNEL AND RESPONSIBILITIES

The brigade commander's responsibilities include:

- o Directing the targeting effort.

- o Provides his expectations, target priorities, desired effects on targets, and TDA requirements.

The FSCCOORD responsibilities include:

- o Ensures the brigade commander's concept of the operation is supported by fire support.

The brigade S3 officer's responsibilities include:

- o Helps the S2 and FSO prioritize the HPT list.
- o Diverts attack assets as required.
- o Specifies the desired effects on the target when they differ than those recommended by the S2 or FSO.
- o Decides where or when high-payoff targets should be attacked for the greatest benefit of the friendly operation.
- o Requests additional division support when required.

The brigade S2 officer's responsibilities include:

- o Informs other staff personnel about target array, enemy's capabilities and projected courses of action, and high-value targets.
- o Leads the intelligence preparation of the battlefield (IPB) effort.
- o Bases on the HPT list, assigns organic, attached or direct support collection assets.
- o Develops requests for information from higher headquarters.
- o Determines, with the FSO and S3, which targets would be the object of coordinated attacks.

The brigade fire support officer's responsibilities include:

- o Advises the commander, XO, and S3 on fire support matters.
- o Ensures that fire planning and fire support requests are processed in consonance with the commander's guidance.
- o Develops the target attack guidance matrix.
- o Keeps the direct support artillery battalion personnel informed

of the target types designated high-payoff targets and those targets that must be processed quickly.

The targeting officer's responsibilities include:

- o Works in the brigade command post to facilitate the exchange of information between the brigade and FA battalion S2s and the fire support element.
- o Should formulate the attack guidance used in the brigade and DS battalion command posts.
- o Recommends changes to the attack guidance as required.
- o With the brigade S2, produces target selection standards.
- o Advises the brigade S2 on specific requirements for target location accuracy and the duration the target may be considered viable for attack.

ENDNOTES

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³Ibid., p. 363.

⁴Trevor N. Dupuy, Curt Johnson, and Grace P. Hayes, Dictionary of Military Terms, p. 216.

⁵U.S. Department of the Army, Field Manual 101-5-1, Operational Terms and Symbols, p. 1-44.

⁶Ibid., p. 1-70.

⁷U.S. Department of the Army, Combined Arms Center, Fort Leavenworth, Kansas, Final Coordinating Draft, AirLand Battle-Future Umbrella Concept, pp. 1-2 (hereafter referred to as "AirLand Battle-Future Concept").

⁸U.S. Department of the Army, AirLand Battle-Future Concept, pp. 16-35.

⁹Ibid. p. 28.

¹⁰U.S. Department of the Army, Training and Doctrine Command, Trends and Implications for the U.S. Army's Future AirLand Battle (Working Draft), pp. 16-17.

¹¹Ibid. pp. 18-19.

¹²Ibid. pp. 20-21.

¹³Ibid. pp. 22-23.

¹⁴Steve Kempf, COL, AirLand Battle-Future. Cited with special permission of COL. Kempf.

¹⁵Raphael J. Hallada, MG, "Fire Support Modernization: A Major Step Toward Deterrence." Military Review, August 1989, p. 5.

¹⁶U.S. Department of the Army, AirLand Battle-Future Concept, p. 36.

¹⁷U.S. Department of the Army, U.S. Army Field Artillery School, AirLand Battle-Future Warfighting Concepts, November 1990, p. 18.

¹⁸Ibid., p. 19.

¹⁹Ibid., p. 18.

²⁰Ibid., p. 23.

²¹U.S. Department of the Army, U.S. Army Field Artillery School, Operation: Firestrike. (Draft).

²²U.S. Department of the Army, Trends and Implications for the U.S. Army Future AirLand Battle (Working Draft), p. 17. (hereafter referred to as Trends and Implications).

²³Clyde J. Sincere, "Target Acquisition for the Deep Battle," Military Review, August 1989, p. 24.

²⁴Ibid., p. 26.

²⁵Raphael J. Halada, MG, "Fire Support Modernization: A Major Step Toward Deterrence," Military Review, August 1989, p. 7.

²⁶Ibid., p.12.

²⁷U.S. Department of the Army, U.S. Army Field Artillery School, Programs and Project Summary Sheets, p. 7-1.

²⁸Raphael J. Halada, MG, "Fire Support Modernization: A Major Step Toward Deterrence," Military Review, August 1989, p. 8.

²⁹Miles A. Libby and Patrick A. Putignano, "See Deep Shoot Deep: UAVs on the Future Battlefield," Military Review, February 1991, p. 42.

³⁰U.S. Department of the Army, U.S. Army Field Artillery School, Programs and Project Summary Sheets, pp. 37-1 and 37-2.

³¹John W. Foss, GEN, "AirLand Battle-Future", Army, February 1991, p. 21.

³²U.S. Department of the Army, Training and Doctrine Command, Trends and Implications for the U.S. Army's Future AirLand Battle (Working Draft), pp. 32-33.

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